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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,729	02/12/2001	Thomas E. Vass	P-4425.003	8003

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COATS & BENNETT, PLLC
P O BOX 5
RALEIGH, NC 27602

EXAMINER
SUBRAMANIAN, NARAYANSWAMY

ART UNIT	PAPER NUMBER
3692	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>13 September 2006</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-19</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-19</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to applicants' communication filed on September 13,

2006. Cancellation of claims 20-25 has been entered. Rejections made under 35 USC § 112,

second paragraph in the last office action are withdrawn in view of the amendments and

applicant's persuasive arguments. Claims 1-19 are currently pending and have been examined.

The rejections and response to arguments are stated below.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions
> and requirements of this title.

3.   Claims 1-19 are rejected under 35 U.S.C. § 101 because the claimed invention is directed

to non-statutory Subject matter.

35 USC 101 requires that in order to be patentable the invention must be a "new and

useful process, machine, manufacture, or composition of matter, or any new and useful

improvement thereof" (emphasis added).

Claim 1 is drawn to "a computer implemented method of promoting commerce

comprising: updating technical coefficients in a regional econometric input-output model using a

regional metropolitan industry-to-industry Internet electronic commerce website". As such the

claimed invention is directed to a judicial exception to 35 U.S.C. 101 (i.e., an abstract idea,

natural phenomenon, or law of nature) and is not directed to a practical application of such

judicial exception because the claim does not require any physical transformation and the

invention as claimed does not produce a useful, concrete, and tangible result.

The Court of Appeals for the Federal Circuit issued opinions in State Street Bank & Trust

Co. v. Signature Financial Group Inc., 149 F. 3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998) and

AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999).

These decisions explained that, to be eligible for patent protection, the claimed invention as a

whole must accomplish a practical application. That is, it must produce a "useful, concrete and

tangible result." State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601 02. To satisfy section 101

requirements, the claim must be for a practical application of the § 101 judicial exception, which

can be identified in various ways: (a) The claimed invention "transforms" an article or physical

object to a different state or thing. (b) The claimed invention otherwise produces a useful,

concrete and tangible result, based on the factors discussed below.

The USPTO's official interpretation of the utility requirement provides that the utility of

an invention has to be (i) specific, (ii) substantial and (iii) credible. See MPEP § 2107. Updating

technical coefficients in a regional econometric input-output model does not meet this

requirement.

The tangible requirement does require that the claim must recite more than a § 101

judicial exception, in that the process claim must set forth a practical application of that § 101

judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-

77 (invention ineligible because had "no substantial practical application"). It is not clear as to

what real-world result is produced by updating technical coefficients in a regional econometric

input-output model.

For an invention to produce a "concrete" result, the process must have a result that can be

substantially repeatable or the process must substantially produce the same result again. In re

Swartz, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000) (where asserted result

produced by the claimed invention is "irreproducible" claim should be rejected under section

101). The opposite of "concrete" is unrepeatable or unpredictable. It is not clear as what the

limitation "using a regional metropolitan industry-to-industry Internet electronic commerce

website" entails. Depending on how the website is used different results will be produced. For

instance if the website is used to gather data, there could be one result. If the website is used to

post data, there could be a totally different result. If the data is input manually to the website (but

the updating of technical coefficients is computer implemented), there could be still a third

result. Hence implementing the steps of the claim does not produce concrete result.

There is no useful, concrete and tangible result produced from implementing the steps of

the claimed invention. The dependent claims 2-19 are rejected for the same reason and by way of

dependency on a rejected independent claim.

The claims 1-19 recite a non-statutory process

The instant claims recite mathematical algorithm which solve a problem of updating the

technical coefficients (as recited in claim 1.) A mathematical algorithm is defined as a

"procedure for solving a given type of mathematical problem." *Gottschalk v. Benson*, 409 U.S.

63, 65, 175 USPQ 673, 674 (1972); *Flook*, 437 U.S. at 585 n.1. 198 USPQ at 195 n.1: Diehr, 450

U.S. at 186, 209 USPQ at 8. **Mathematical algorithms are non- statutory because they have**

been determined not to fall within the § 101 statutory class of a "process." *Benson.* "[A]n

algorithm, or mathematical formula, is like a law of nature, which cannot be the subject of a

patent." *Diehr,* 450 U.S. at 186, 209 USPQ at 8. The exception applies only to mathematical

algorithms since any process is an " algorithm" in the sense that it is a step-by-step procedure to

arrive at a given result. *In re Walter*, 618 F.2d 758, 764 n.4, 205 USPQ 397, 405 n.4, (CCPA

1980); *Pardo,* 684 F.2d at 915, 214 USPQ at 676.

A mathematical algorithm is not made statutory by "attempting to limit the use of the

formula to a particular technological environment." *Diehr*, 450 U.S. at 191, 209 USPQ at 10.

Thus, "field of use" or "end use" limitations in the claim preamble are insufficient to constitute a

statutory process. This is consistent with the usual treatment of preambles as merely setting forth

the environment. See *Flook* (the preamble while limiting the application of the claimed method

to "a process comprising the catalytic chemical conversion of hydrocarbons" did not serve to

render the method statutory); Walter, 618 F.2d at 769, 205 USPQ at 409 ("Although the claim

preambles relate the claimed invention to the art of seismic prospecting, the claims themselves

are not drawn to methods of or apparatus for seismic prospecting"); *de Castelet*, 562 F.2d at

1244 n.6. 195 USPQ at 446 n.6 ("The potential for misconstruction of preamble language

requires that compelling reason exist before that language may be given weight"). Compare

Waldbaum, 559 F.2d at 616 n.6. 194 USPQ 469 n.6 (portion of preambles referred to in method

portion of claims "are necessary for completeness of the claims and are proper limitations

thereto").

Data-gathering steps

If the only limitations in the claims in addition to the mathematical algorithm are data-

gathering steps which "merely determine values for the variables used in the mathematical

formulae used in making the calculations." Such antecedent steps are insufficient to change a

nonstatutory method of calculation into a statutory process. See *In re Richman*, 563 F.2d at 1030.

195 USPQ at 343; *Sarkar,* 588 F.2d at 1335. 200 USPQ at 139 ("If the steps of gathering and

substituting values were alone sufficient, every mathematical equation, formula, or algorithm

having any practical use would be per se subject to patenting as a 'process' under §101"):

Gelnovatch, 595 F.2d at 41 n.7. 201 USPQ at 145 n.7 ("claimed step of perturbing the values of a

set of process inputs (step 3), in addition to being a mathematical operation, appears to be a data-

gathering step").

The claimed inventions recite data gathering step (updating technical coefficients in a

regional econometric input-output model). When viewed in light of the specification, this step

constitutes data gathering. As per the court rulings cited above, the claims constitute

mathematical algorithm(s) applied to data gathered in the respective process steps. The fact that

a mathematical algorithm is applied to solve a problem of updating technical coefficients does

not make the claim statutory. *Walter,* 618 F.2d at 764-65 n.4, 205 USPQ at 405 n.4. "The type

of mathematical computation involved does not determine whether a procedure is statutory or

nonstatutory." *In re Gelnovatch*, 595 F.2d 32, 41.201 USPQ 136, 145 (CCPA 1979). A "claim

for an improved method of calculation, even when tied to a specific end use, is unpatentable

subject matter under §101." *Flook*, 437 U.S. at 595 n.18, 198 USPQ at 199 n.18. Mathematical

algorithms may represent scientific principles, laws of nature, or ideas or mental processes for

solving complex problems. See *Meyer*, 688 F.2d at 794-95, 215 USPQ at 197. The dependent

claims 2-19 are rejected for the same reason and by way of dependency on a rejected

independent claim.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

5.   Claim 1 recites in the preamble "a computer implemented method of promoting

commerce". It is not clear how the objective of promoting commerce is achieved by the step of

the method. Appropriate clarification/correction is required. The dependent claims 2-19 are

rejected for the same reason and by way of dependency on a rejected independent claim.

The claim does not specify the manner in which the website is used for updating the

technical coefficients making the scope of the claim indefinite. The relationship between the

technical coefficients and the website (or the relevancy of the website to the technical

coefficients) is not clear making the scope of the claim vague and unclear. Further the term

"updating" implies an "initial value technical coefficients" exists. Nowhere in the claim is there

any reference to an initial value or beginning value of technical coefficients. Hence the limitation

"updating technical coefficients" lacks antecedent basis. . The dependent claims 2-19 are rejected

for the same reason and by way of dependency on a rejected independent claim.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conklin et al

(US Patent 6,141,653) in view of Israilevich et al (Journal of Regional Science 1997)

Claim 1, Conklin teaches a computer implemented method of promoting commerce

comprising updating data using a regional metropolitan industry-to-industry Internet electronic

commerce website (See Conklin Abstract, Column 18 lines 12-15, Column 20 lines 19-22 and

Column 21 lines 42-45).

Conklin does not explicitly teach the feature where the data are technical coefficients in a

regional econometric input-output model.

Israilevich teaches the feature where the data are technical coefficients in a regional

econometric input-output model (See Israilevich Abstract and Pages 576-586).

It would have been obvious to one of ordinary skill in the art to use the website for

various e-commerce activities including updating technical coefficients in a regional econometric

input-output model. The updates would have helped an economist keep track of the changes in

the structural relationships between the various industries.

With reference to claims 2-19, Conklin teaches the steps of continuously updating said

electronic commerce website (See Conklin Column 20 lines 19-22 and Column 21 lines 42-45)

wherein using a regional metropolitan industry to industry Internet electronic commerce website

comprises accepting orders from industries through the website (See Conklin Column 14 lines 3-5,

participants are interpreted to include industries also); wherein using a regional metropolitan

industry to industry Internet electronic commerce website comprises tracking transactions between

industries on the website (See Conklin Column 14 lines 5-6, participants are interpreted to include

industries also); establishing an industry to industry electronic commerce web site for a particular

region (See Conklin Column 18 lines 12-15); comprising converting transaction data derived from

said tracking into a regional input-output matrix of technical coefficients (Old and well known);

recording transactions that occur between businesses on the electronic website (See Conklin

Column 14 lines 21-25 and Column 18 lines 66-67); identifying new businesses in new industrial

sectors based on said tracking (See Conklin Column 30 lines 5-10) and monitoring said new

businesses in a specific region (See Conklin Column 19 lines 45-51); storing inter-industrial

purchase and sales transaction data on a temporary basis in a website host computer (See Conklin

Column 14 lines 21-25, transaction data for the community is interpreted to include inter-industrial

purchase and sales transaction data); collecting and storing data from single transactions between

firms on a temporary basis on the website host computer (See Conklin Column 14 lines 21-25);

transmitting data from the website host computer on a plurality of businesses in a plurality of

sectors to a computer database (See Conklin Column 14 lines 21-25); collecting, storing,

aggregating and analyzing data on multiple transactions that occur over a fixed time interval stored

in said computer database (See Conklin Column 20 lines 55-63 and Column 34 lines 5-9);

allowing single buyers and single sellers to meet and negotiate terms and conditions of a

transaction on said website (See Conklin Abstract); tracking transactions entered into as a result of

said allowing single buyers and single sellers to meet and negotiate terms and conditions of a

transaction on said website (See Conklin Abstract); allowing multiple buyers and multiple sellers

to post fixed prices for fixed quantities to consummate a transaction on said website (See Conklin

Column 20 lines 24-34); tracking transactions entered into ms a result of allowing multiple buyers

and multiple sellers to post fixed prices for fixed quantities to consummate a transaction on said

website (See Conklin Column 20 lines 24-34 and Column 19 lines 44-47); allowing an auction

exchange market to occur on said website (See Conklin Column 20 lines 25-34) and tracking

transactions entered into as a result of said allowing an auction exchange market to occur on said

website (See Conklin Column 19 lines 44-47, tracking activity is interpreted to include tracking

transactions).

Response to Arguments

8.   Applicant's arguments with respect to pending claims have been considered but are moot

in view of the new ground(s) of rejection.

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

(a) Kauffman (US Patent 6,125,351 A) (September 26, 2000) System and method for the

synthesis of an economic web and the identification of new market niches.

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dr. Narayanswamy Subramanian whose telephone number is

(571) 272-6751. The examiner can normally be reached Monday-Thursday from 8:30 AM to

7:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richard Chilcot can be reached at (571) 272-6777. The fax number for Formal or

Official faxes and Draft to the Patent Office is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PMR or Public PAIR. Status information for unpublished

applications is available through Private PMR only. For more information about the PMR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dr. N. Subramanian
Primary Examiner

November 21, 2006